

**TWO NEW SPECIES OF *AGARODES* BANKS
(TRICHOPTERA: SERICOSTOMATIDAE) FROM SOUTHEASTERN
UNITED STATES**

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Abstract.—Two new species, *Agarodes logani*, from the eastern panhandle of Florida, and *Agarodes tuskaloosa*, from west-central Alabama, are described, illustrated, and compared to congeners. The genus now totals twelve species, all restricted to eastern North America.

Key Words: Trichoptera, Sericostomatidae, *Agarodes*, new species, southeast

The genus *Agarodes* Banks is restricted to eastern North America and ranges from southern Canada to the southern United States (Ross and Scott 1974). *Agarodes* larvae prefer smaller, spring-fed streams with a medium current and sandy substrate but they have been occasionally collected in larger streams fed by surface water and in the sandy, depositional areas of lakes.

Ten species of *Agarodes* were previously recognized (Harris 1987) with all but *A. distincta* Ulmer and *A. grisea* Banks restricted to southeastern United States (Ross and Scott 1974). In Alabama, five species occur, *A. crassicornis* Walker, *A. libalis* Ross and Scott, *A. alabamensis* Harris on the Coastal Plain; *A. grisea* Banks in northern Alabama; and *A. stannardi* Ross in a restricted, northwestern region of the state. To this list from Alabama an apparently rare, new species is added, *A. tuskaloosa*. This new species is currently known only from the type locality, on a small, spring-fed stream at the northern edge of the Coastal Plain. In Florida, three species occur, *A. crassicornis* Walker and *A. libalis* Ross and Scott at scattered localities; and *A. ziczac* Ross and Scott known only from

the type locality in the central panhandle region. To this Florida list, *A. logani*, a new species, is added. This species is currently known only from the type locality, a small spring-run in a deep ravine, in the eastern panhandle region. *Agarodes tuskaloosa* and *Agarodes logani* are members of the subgenus *Agarodes* Banks (Ross and Wallace 1974) based on the small antennal scape and slender mesal lobe of the maxillary palp. Both were collected with a black light.

Type material is deposited at the National Museum of Natural History, Smithsonian Institution, Washington D.C. Terminology follows that of Schmid (1980) and Ross and Scott (1974).

***Agarodes logani* Keth and Harris,
new species
(Figs. 1, 4)**

Diagnosis.—This species resembles *A. stannardi* but differs, primarily, in the elongate, strongly curved dorsomesal process of the mesal processes of the inferior appendage. The dorsomesal process (Fig. 1) of *A. logani* is about twice the length seen in *A. stannardi* (Fig. 2) and much more serrate ventrally. The female is very similar to *A.*

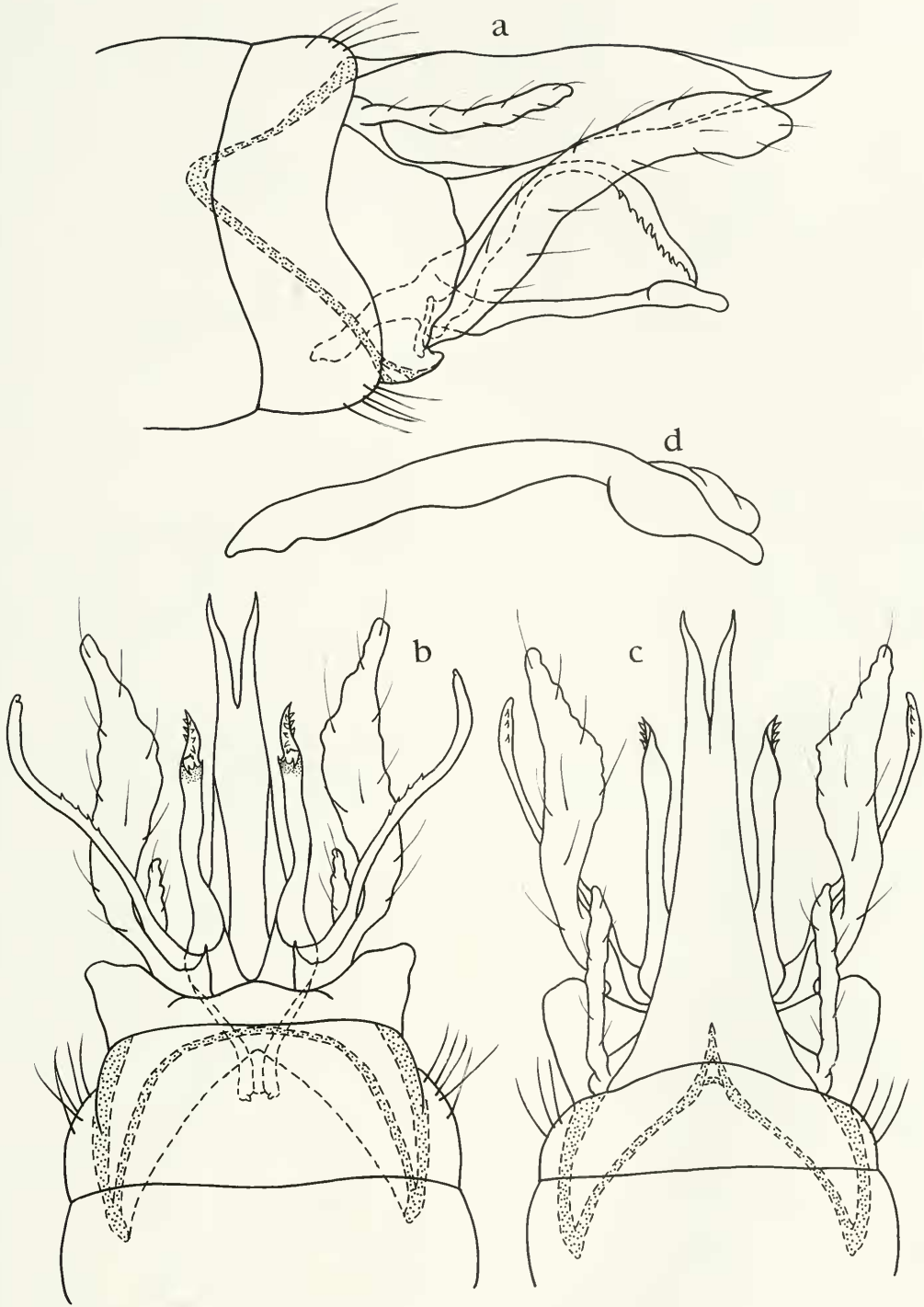


Fig. 1. *Agarodes logani*, male genitalia. a) lateral, b) ventral, c) dorsal, d) phallus.

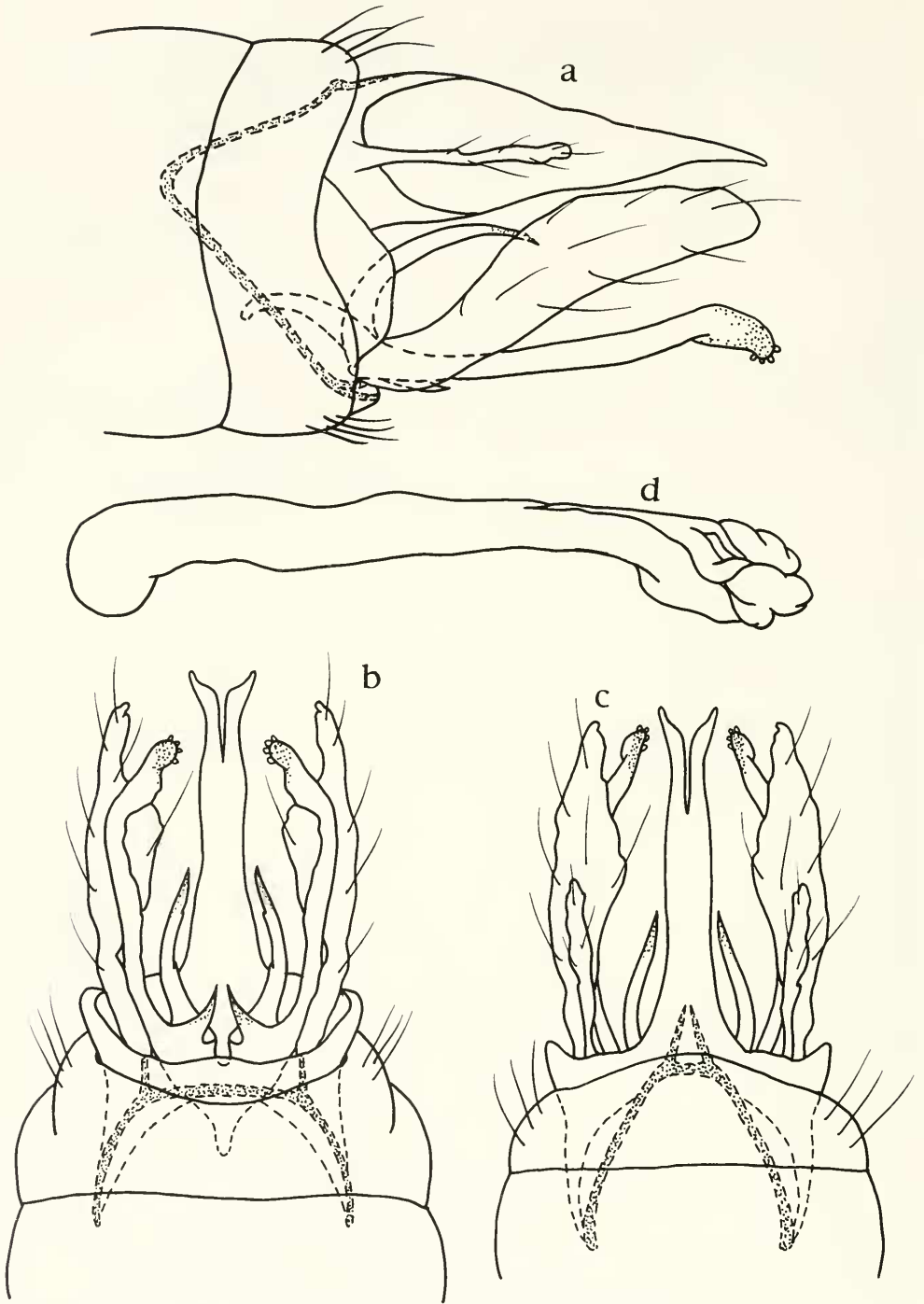


Fig. 2. *Agarodes stannardi*, male genitalia. a) lateral, b) ventral, c) dorsal, d) phallus.

stannardi differing only in the pair of short processes extending from apex of the dorsum of segment IX. These processes in *A. stannardi* are divergent and basally lobate in dorsal view (Fig. 3) and in *A. logani* narrow and lacking basal lobes (Fig. 4).

Male.—Length 9–11 mm. Body, legs, and head golden to dark brown. Antenna brown with 43 segments, scape small and rectangular. Labial palpus 0.9 mm long; maxillary palpus 0.5 mm in length, oblong, and bearing 2 small inner processes. Wings golden to dark brown; forewing with extensive peg-like setae in anal region and along M and Cu veins. Abdominal segment VIII annular. Segment IX inserted within segments VII and VIII, reduced, and dorsally fused with base of segment X. Segment X elongate and narrow in dorsal view, divided apically; in lateral view sinuate dorsally and lightly sclerotized, tapering to a point and curving slightly dorsad at apex. Genitalia as in Fig. 1 with preanal appendage narrow and elongate extending nearly half length of tergum X, curving dorsad. Inferior appendage uniform over entire length in lateral view; in ventral view united basally, slender anteriorly, widening midway, and narrowing posteriorly. Mesal processes bipartite; dorsomesal process over $\frac{3}{4}$ length of inferior appendage, slender and narrowing to acute apex with large, serrate, ventrad projections from $\frac{2}{3}$ of length to apex and curving markedly ventrad in lateral view. Ventromesal process thin and nearly equal in length to dorsomesal process, divergent, curving markedly mesad at tip, slightly serrate distally at midlength and dorsally at apex. Phallus long and cylindrical, widening at membranous apex.

Female.—Length, color, and general structure as in male. Genitalia as in Fig. 4 with cerci long and contiguous, mesally merging with a short lobe. Apex of tergum IX having a pair of short processes projecting posteriorly from dorsum; processes narrow and fused basally, lacking basolateral lobes. Genital chamber narrow with margins folded, sclerotized, and curving

mesad in ventral view, a pair of sclerous, scoop-like lobes diverging from base in dorsal view.

Immatures.—Unknown

Etymology.—Latin: of Logan, primary author's son

Holotype.—♂, Florida, Gadsden County, headwaters of Quincy Creek, 7 km. north Quincy at Florida A&M Research and Extension Center, N30°39'27", W84°36'50", 19 April 1994, Pescador and Rasmussen.

Paratypes.—Florida, same as above, 1 ♂; same, but N30°39'19", W84°36'51", 6 October 1993, Jones, Pecador, and Rasmussen, 1 ♀.

Distribution.—*Agarodes logani* is known only from the type locality. More specimens have been found in the same area including *Agarodes* larvae which, upon rearing, may be found to be *A. logani*.

Agarodes tuskaloosa Keth and Harris, new species

(Fig. 5)

Diagnosis.—This species resembles *A. stannardi* and the preceding new species, but it differs from *A. stannardi* in the much thinner inner process of the mesal process of the inferior appendage and from *A. logani* in the presence of a short basomesal process (Fig. 5). The dorsal and ventromesal processes of *A. tuskaloosa* are like those of *A. stannardi* but twice the length.

Male.—Length 11–13 mm. Body, legs and head golden to reddish brown. Antenna dark brown with 43 segments, scape small and trapezoidal. Labial palpus 1.0 mm long; maxillary palpus 0.6 mm in length, oblong. Wings light brown. Abdominal segment VIII annular. Segment IX inserted within segments VII and VIII, reduced, and dorsally fused with base of segment X. Segment X elongate and narrow in dorsal view, split apically; narrowing to elongate, acute apex in lateral view. Genitalia as in Fig. 5 with preanal appendage narrow, elongate, $\frac{1}{2}$ length of tergum X, uniform over entire length in lateral view. Inferior appendage narrow basally, broadening toward apex in

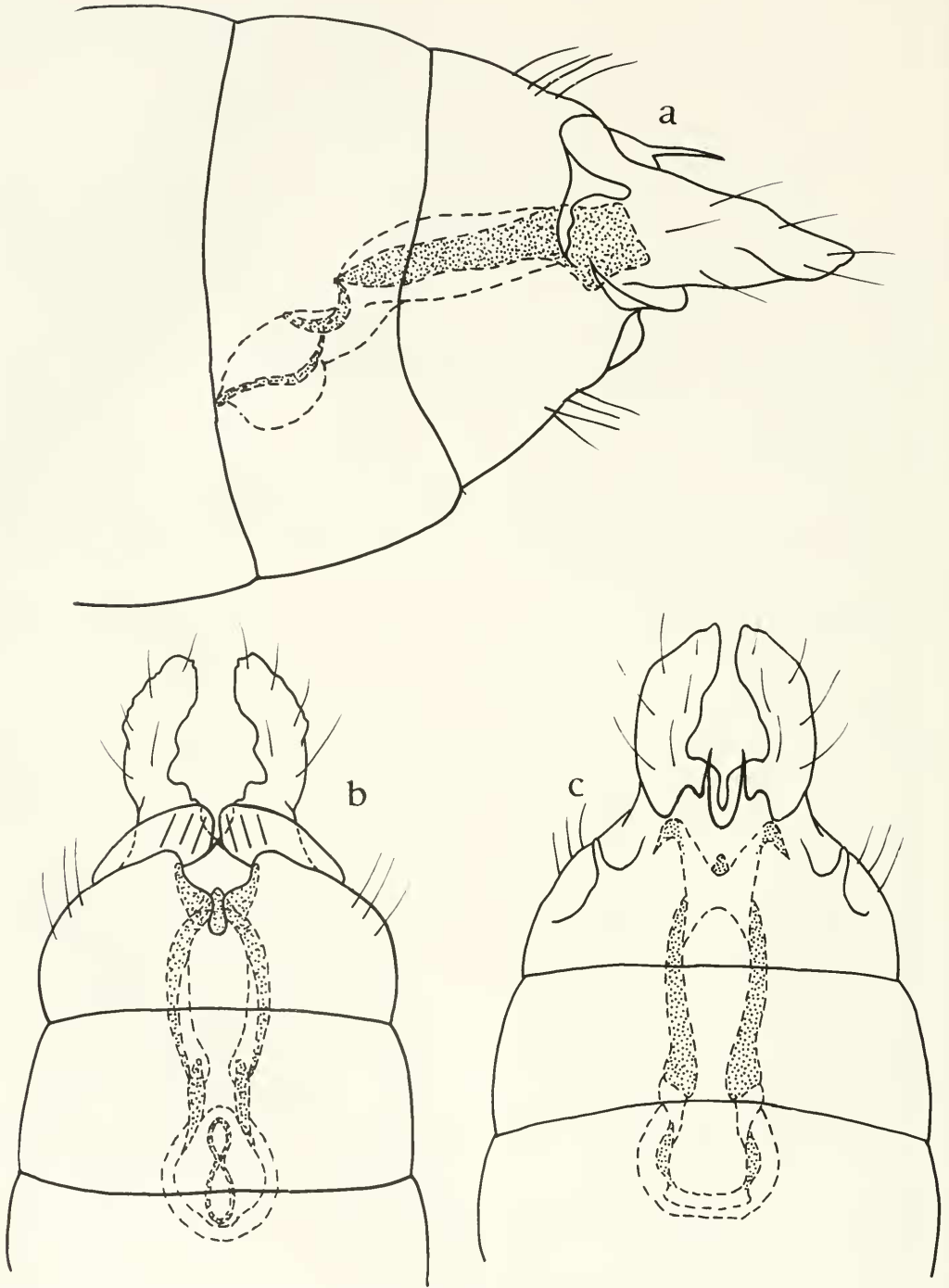


Fig. 3. *Agarodes stamardi*, female genitalia. a) lateral, b) ventral, c) dorsal.

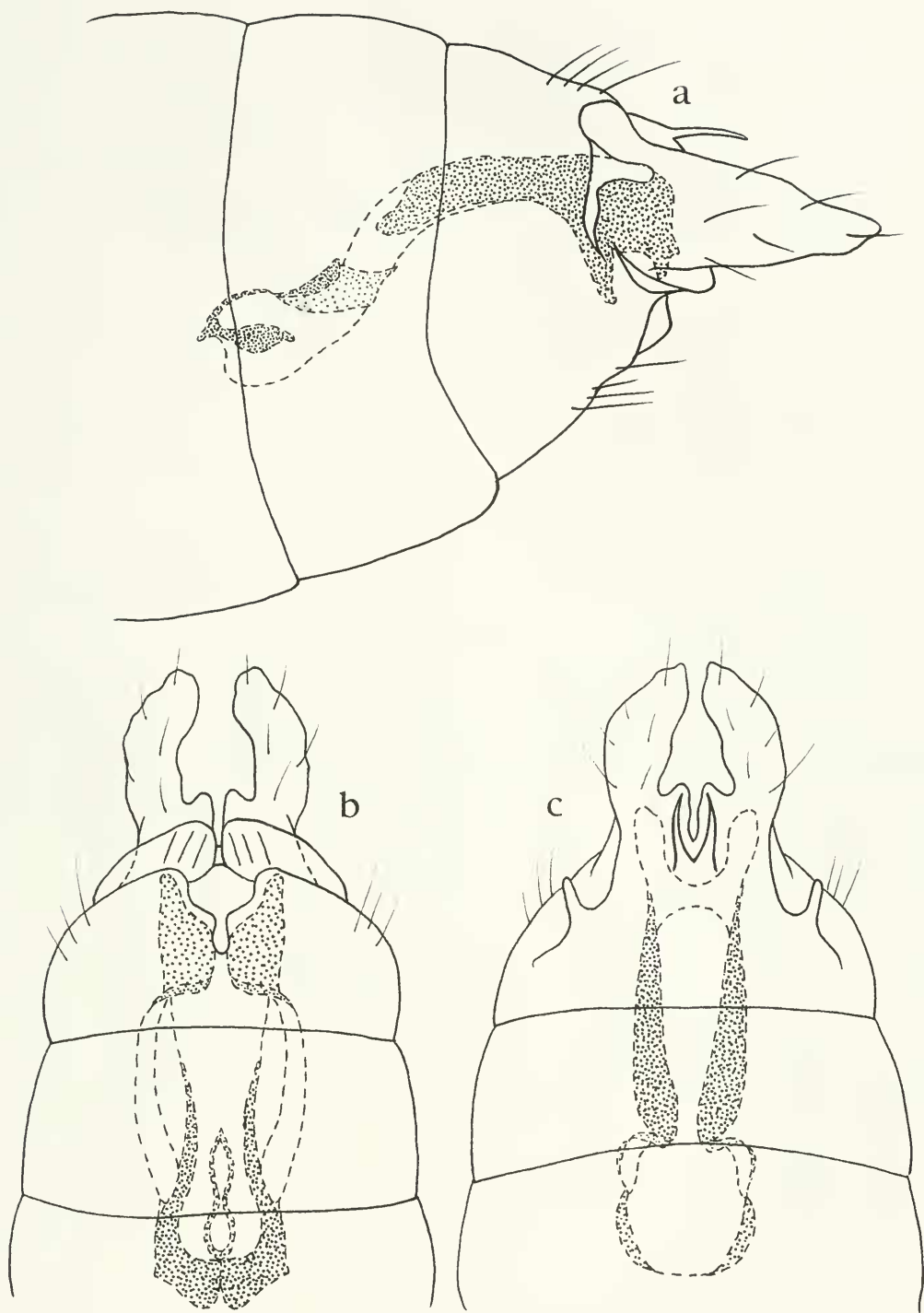


Fig. 4. *Agarodes logani*, female genitalia. a) lateral, b) ventral, c) dorsal.

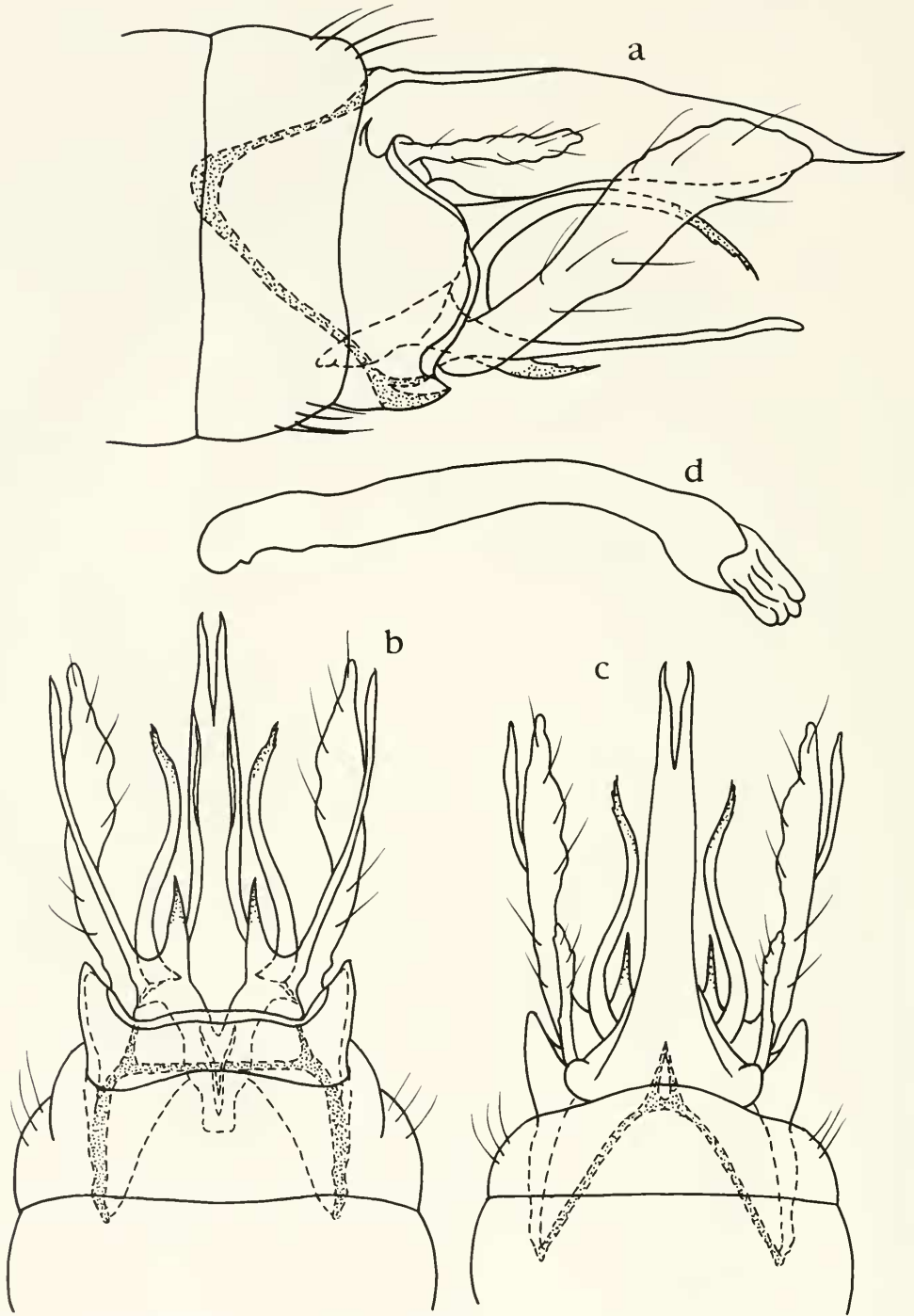


Fig. 5. *Agarodes tuskaloosa*, male genitalia. a) lateral, b) ventral, c) dorsal, d) phallus.

lateral view; in ventral view slender and united basally, broadening $\frac{2}{3}$ of length, and tapering to acute apex. Mesal processes tripartite; basomesal process short and acute with slightly serrate apex dorsally, dorso-mesal process $\frac{3}{4}$ length of inferior appendage and strongly curved in lateral view, apex slightly serrate ventrally; inner process thin, uniform, and elongate. Phallus long and cylindrical, widening slightly at membranous apex.

Female.—Unknown

Immatures.—Unknown

Etymology.—Native American spelling: of Tuscaloosa region

Holotype.—♂, Alabama, Tuscaloosa County, Big Sandy Creek, 7.2 km. south of Coaling, on unmarked county road, 15 May 1991, Harris.

Paratype.—Alabama, locality and date as holotype, 1 ♂.

Distribution.—*Agarodes tuskaloosa* is known only from the type locality. Extensive collecting at the type locality and elsewhere in Big Sandy Creek has yielded no additional specimens.

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